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Measles in Washington State

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Measles is a highly communicable viral rash illness. Although the disease is rare in Washington and the United States due to routine childhood immunization, sporadic cases of measles and outbreaks continue to occur and challenge public health organizations.

The Disease

Measles, day 4 rash

CDC photo/Barbara Rice

Measles causes fever, cough, runny nose, and conjunctivitis followed by a rash that starts on the head and progresses to the rest of the body. About 30% of persons with measles have complications. Persons considered at highest risk for complications include children under one year of age, pregnant women, and persons who are immunocompromised. Mild complications include ear infections or diarrhea. More severe complications are pneumonia or encephalitis which may result in death. Measles during pregnancy can cause miscarriage or premature delivery. The death rate for measles in the United States is 1–2 deaths per 1000 cases.

Measles is one of the most highly contagious infections among humans. The virus is spread from one person to another through respiratory secretions. Exposure most commonly occurs through airborne transmission or direct contact with moist respiratory secretions. A person with measles is contagious from four or five days before the rash starts to four days afterwards. The incubation period of measles from exposure to rash onset is generally 14 days (range 7–21).

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Measles in Washington and the United States

In 1964 there were 22,799 measles cases reported in Washington State for a rate of 758/100,000 population. Since then, the rate has steadily fallen to less than 1/100,000 with the exception of a national resurgence of measles during 1989–1990. The last deaths due to measles in Washington occurred during this time. In 1996 a measles outbreak in Clark County resulted in 38 cases including several in surrounding counties.

In 2000, measles was declared no longer endemic in the United States. There were fewer than 100 cases a year in the country during 2002–2007. Most cases in the United States result from returning travelers infected outside the United States or foreign visitors exposed before arrival in the United States. Thus far in 2008, outbreaks due to imported measles have occurred in several areas of the United States including Arizona, San Diego, and most recently Washington State.

2008 Measles Outbreak in Grant County, WA

On April 28, 2008, the Grant County Health District notified the Washington State Department of Health of eight suspect measles cases. Several had severe symptoms with clinical evidence of pneumonia. Since then, an additional seven cases have been identified for a total of 15 confirmed cases as of May 14th. All are unimmunized children between the ages of 4 and 18 years. There have been no hospitalizations or deaths among these measles cases. Seven cases are laboratory confirmed and eight were diagnosed through epidemiologic links to other cases.

The date of rash onset for the most recent case was May 2. Further investigation of this outbreak and ongoing measles outbreak control measures are underway in Grant County, including identifying contacts and verifying their immunization records. The Washington State Department of Health Communicable Disease Epidemiology Section and Public Health Laboratories are working closely with Grant County Health District and other local health jurisdictions to assure rapid identification of any additional measles cases that occur so that measles control activities, if needed, can be initiated quickly.

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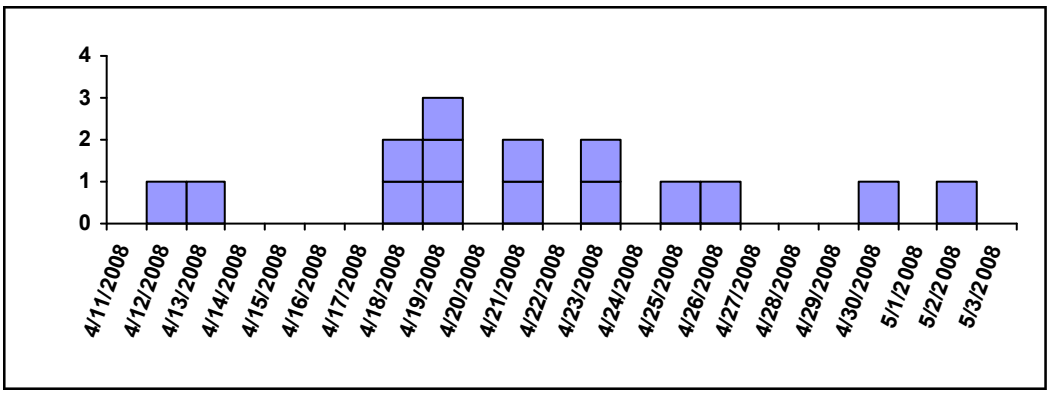
Measles Cases in Grant County by Date of Rash Onset
(as of May 14, 2008)



Controlling Measles

Measles is an immediately notifiable condition in Washington State. Suspected or confirmed cases should be reported to the local health jurisdiction. Measles is highly communicable, with over 90% of susceptible contacts developing illness after exposure.

At the first health care visit draw serum and collect specimens for viral isolation (nasal wash and urine) from persons suspected of having measles. The clinical presentation, exposure history, and immunization status can help to determine the likelihood of the diagnosis. Potential sources for exposure include contacts with rash illnesses, large gatherings, travel via public or commercial vehicles, contact with a health care facility as a patient or worker, travel to an area where measles is occurring, or contact with persons having traveled to an area where measles is occurring.

Suspect cases

Because measles is so contagious, any susceptible person having direct contact with the case should be considered exposed along with anyone who was in the same room with a case for even a few minutes. To prevent airborne transmission in health care settings, anyone who enters a room within two hours after a measles case was present should also be considered exposed. Health care facilities should make special arrangements when seeing possible measles cases, such as requiring the patient to use a separate entrance and keeping the patient out of areas where other patients are present. In addition to standard precautions, hospitalized patients should be cared for using airborne precautions until four days have passed since the date the rash started.

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Persons suspected of having measles should be advised to stay home and not attend child care, school, work, or social activities and to avoid all public places. They should take extra care to avoid contact with susceptible children (particularly infants), pregnant women, and immunosuppressed persons.

Susceptible contacts

Vaccinating susceptible contacts within 72 hours of exposure may prevent disease. If 72 hours have already passed since the exposure, vaccination may still be recommended for susceptible contacts because it would provide protection were future exposures to occur. Immune globulin (IG) can prevent or attenuate measles infection if given within six days after exposure. IG is recommended for susceptible contacts who are pregnant, under one year of age, or immunocompromised. Patients should be warned that IG may increase the incubation period to the maximum length of 21 days.

Susceptible, previously unimmunized contacts should avoid all public settings from seven days after the date of first exposure until 21 days after the date of last exposure regardless of whether or not they received vaccine or immune globulin.

Universal immunization

Universal immunization given to all except those with contraindications can prevent measles transmission. Routine immunization with two doses of MMR (measles, mumps, rubella) is recommended for all children with the first dose given at ages 12–15 months and the second before school entry at 4–6 years of age. Documenting two doses of MMR is particularly important for health care workers and in a community where a measles outbreak is occurring. Two doses of MMR vaccine are also recommended for students attending college or other post-high school institutions as well as for international travelers. Persons born in 1957 or later should receive at least one dose of MMR vaccine if they do not have evidence of immunity to these three diseases. Achieving high levels of immunization will prevent measles transmission and therefore reduce the potential for severe complications.

Resource

Measles fact sheet: http://www.doh.wa.gov/EHSPHL/factsheet/measles.htm , or
http://www.doh.wa.gov/EHSPHL/factsheet/measles.pdf